The role of pharmacists in geriatric teams: the time is now

E. Delgado-Silveira¹ · T. Bermejo-Vicedo²

Published online: 30 September 2021
© European Geriatric Medicine Society 2021

The safe use of pharmacotherapy is of particular relevance in elderly patients. Frailty is associated with lower survival, more hospitalizations, and more long-term care (LTC) admissions. Polypharmacy and inappropriate prescribing (IP) are more frequent in these patients and may lead to Adverse Drug Events (ADEs). Different strategies and interventions can reduce ADEs and IP in elderly patients. These can be performed by a range of staff involved in their health care and include education on drug use, deprescribing, the use of computerized decision support systems, comprehensive geriatric assessment, and treatment review by pharmacists. However, although all of them have proven to be effective and safe, they must be performed in a multidisciplinary team setting to achieve health benefits in these patients.

Pharmacists, as members of multidisciplinary teams and in any health care setting, play a relevant role in the appropriate use of pharmacotherapy in frail elderly patients. In such settings, common criteria must be established for the work of each health care team member. A consensus document on clinical practice, research, and training has recently been published by a multidisciplinary group of geriatricians and pharmacists. Without doubt, this document will prove of great use in making consensus decisions [1, 2].

One of the problems concerns health care transitions, in that patients are treated by multiple health care workers, in particular by different prescribers, in hospital and community settings. Pharmacists are involved in all the stages of the continuum of care and have full information on patients' treatment and care. Thus, they can make key contributions by transferring information between all health care workers (reconciliation) and by appropriately informing patients of changes in their treatment [3]. Previous authors have studied

the impact of pharmacist interventions in different care settings. Although we lack clear evidence on their impact on health outcomes, quality of life, and cost-effectiveness, we do know that the best results are generally obtained when expert pharmacists work in collaboration with or are integrated into multidisciplinary teams.

A recent narrative review [4] investigated the effect of interventions by hospital pharmacists in elderly polymedicated patients on health outcomes, use of health resources, and costs. It found that the results were better when hospital pharmacists were integrated into the teams, worked in coordination with other workers who care for these patients, and when interventions initiated in hospital settings were continued in community settings. However, it would appear that improvement in these patients depends on multiple factors, and therefore pharmacists, like other health care workers, should focus on reinforcing all aspects related to pharmacotherapy during and after hospital admission.

In the last 20 years, health care models in developed countries have been counting on the presence of expert pharmacists to improve pharmacotherapeutic care and reduce iatrogenesis in institutionalized patients. Depending on the model, these pharmacists may be specialists or community pharmacists. A recent survey [5] conducted in Spanish nursing homes found that 46% of Pharmacy Services attended these homes, 42.3% conducted a comprehensive treatment review, and 34.6% participated in comprehensive geriatric assessment within the interdisciplinary teams. In other countries, such as Sweden, the UK, Switzerland, USA, and Australia, studies have also been conducted on the significant role played by pharmacists in nursing homes in informing and educating patients about their treatment, showing that the relationship between pharmacists and prescribers is key to providing a review that improves the safe use of medications. Recent systematic reviews have concluded that pharmaceutical intervention reduces IP, especially that of psychotropic drugs, reduces costs and fall rates, and improves quality of life; however, the results were inconclusive in terms of mortality, hospitalization, and admissions [6, 7]. Interventions

✉ E. Delgado-Silveira
Eva.delgado@salud.madrid.org

¹ Servicio de Farmacia. Hospital, Universitario Ramón y Cajal. Ctra. Irycis, Colmenar Viejo, km 9,100, 28034 Madrid, Spain

² Sociedad Española Farmacia Hospitalaria (SEFH), Madrid, Spain

by community pharmacists in pre-dispensing medication reviews in nursing homes are also helpful in improving the safety of pharmacotherapy in these patients. In Germany, community pharmacists supply drugs to LTC facilities and perform medication review for residents older than 65 years with polypharmacy [8].

Regarding the care of elderly patients living at home, it has been shown that interventions by community pharmacists and by pharmacists in primary-care teams (whose presence has increased in recent years) are particularly relevant in detecting and reducing IP and unnecessary drugs and in reducing hospital readmissions. These interventions are also more beneficial when pharmacists are integrated within multidisciplinary teams [9–15].

For all these reasons, we consider that pharmacists are highly qualified professionals with a broad knowledge of pharmacotherapy, and therefore, they should have a strategic role in the health care of elderly patients. Their intervention in hospitals, nursing homes, and communities is an important pillar of health care. This type of health care requires an integrated care model that is implemented by a coordinated interdisciplinary team over the long term in all areas of the health system. In this sense, many organizations and scientific societies have recommended that such interdisciplinary teams should include pharmacists. Furthermore, it is essential to define the role, training, and competencies of each health care professional. Thus, as suggested by recent studies, pharmacotherapy management will be more effective and safer, and better health, improved quality of life, and better economic results will be achieved. Finally, we have to define the most efficient interventions or, depending on the type of patient, which interventions should be performed. In addition, integrated care necessitates a flow of information on pharmacological treatment. To this end, we believe that a single electronic medical record available to all health workers in all health care settings is of fundamental importance.

Today, more than ever, efficient decision-making in health policy and management relies on having available health outcome indicators and quality-of-life indicators of elderly patients determined by interdisciplinary teams, such that these decisions are based on evidence. In the setting of pharmacist interventions, it is a priority to review and reach a consensus on the outcome indicators of these interventions, given that reduced mortality rates may not be a good indicator of their effect on patients. Therefore, the use of Patient Reported Outcomes (PROs) or quality-of-life indicators may be more appropriate to assess their impact on safe and effective pharmacotherapy in elderly patients.

Declarations

Conflict of interest The author has no relevant financial or non-financial interests to disclose.

Ethics approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent For this type of study, no informed consent is required.

References

- Petrovic M, Annemie S, Graziano O (2016) Optimization of geriatric pharmacotherapy: role of multifaceted cooperation in the hospital setting. *Drugs Aging* 33(3):179–188. <https://doi.org/10.1007/s40266-016-0352-7>
- Liacos M, Page AT, Etherton-Beer C (2020) Deprescribing in older people. *Aust Prescr* 43:114–120. <https://doi.org/10.18773/austprescr.2020.033>
- Tomlinson J, Cheong VL, Fylan B, Silcock J, Smith H, Karban K et al (2020) Successful care transitions for older people: a systematic review and meta-analysis of the effects of interventions that support medication continuity. *Age Ageing* 49(4):558–569. <https://doi.org/10.1093/ageing/afaa002>
- Delgado-Silveira E, Vélez-Díaz-Pallarés M, Muñoz-García M, Correa-Pérez A, Álvarez-Díaz AM, Cruz-Jentoft AJ. Effects of hospital pharmacist interventions on health outcomes in older polymedicated inpatients: a scoping review. *Eur Ger Med*. <https://doi.org/10.1007/s41999-021-00487-3> (In press)
- Fernández-Villalba EM, Gil-Gómez I, Peris-Martí JF, García-Mina Freire M, Delgado-Silveira E, Juanes-Borrego A (2020) Prestación farmacéutica especializada en centros sociosanitarios en España. *Farm Hosp* 44(1):3–9. <https://doi.org/10.7399/fh.11248>
- Lee SWH, Mak VSL, Tang YW (2019) Pharmacist services in nursing homes: a systematic review and meta-analysis. *Br J Clin Pharmacol* 85:2668–2688. <https://doi.org/10.1111/bcp.14101>
- Sadowski C, Charrois TL, Sehn E, Chatterley T, Kim S (2020) The role and impact of the pharmacist in long-term care settings: a systematic review. *J Am Pharm Assoc* 60:516–524. <https://doi.org/10.1016/j.japh.2019.11.014>
- Bitter K, Pehe C, Kruger M, Heuer G, Quinke R, Jaehde U (2019) *BMC Geriatr* 19(1):39. <https://doi.org/10.1186/s12877-019-1052-z>
- Royal Pharmaceutical Society (2018) Primary Care Pharmacy. Royal pharmaceutical society of great Britain. <https://www.rpharm.org/resources/careersinformation/career-options-in-pharmacy/primary-care-pharmacy>. (Accessed Feb 2021)
- Prudencio J, Cutler T, Roberts S, Marin S, Wilson M (2018) The effect of clinical pharmacist-led comprehensive medication management on chronic disease state goal attainment in a patient-centered medical home. *J Manag Care Spec Pharm* 24:423–429
- Tan EC, Stewart K, Elliott RA, George J (2014) Pharmacist services provided in general practice clinics: a systematic review and meta-analysis. *Res Soc Adm Pharm* 10:608–622
- National Health System (2020) Structured medication reviews and the primary care network multidisciplinary approach. National Health System. Available <https://www.england.nhs.uk/primary-care/pharmacy/smr/> (Accessed Mar 2021)
- Lussier M, Evans HJ, Wright EA, Gionfriddo MR (2020) The impact of community pharmacist involvement on transitions of care: a systematic review and meta-analysis. *J Am Pharm Assoc* 60:153–162. <https://doi.org/10.1016/j.japh.2019.07.002>

14. Khera S, Abbasi M, Dabravolskaj J, Sadowski C, Yua H, Chevalier B (2019) Appropriateness of medications in older adults living with frailty: impact of a pharmacist-led structured medication review process in primary care. *J Prim Care Community Health* 10:1–8. <https://doi.org/10.1177/21501327198902>
15. Tommelein E, Mehuys E, Petrovic M, Somers A, Colin P, Boussery K (2015) Potentially inappropriate prescribing in community-dwelling older people across Europe: a systematic

literature review. *Eur J Clin Pharmacol* 71:1415–1427. <https://doi.org/10.1007/s00228-015-1954-4>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.